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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,260	03/01/2002	Tomotaka Koketsu	1055-02	2943
35811	7590	01/13/2005	EXAMINER	
IP GROUP OF DLA PIPER RUDNICK GRAY CARY US LLP 1650 MARKET ST SUITE 4900 PHILADELPHIA, PA 19103			BEFUMO, JENNA LEIGH	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/070,260

Applicant(s)

KOKETSU ET AL.

Examiner

Jenna-Leigh Befumo

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-- Th MAILING DATE of this communication appears n the cover sheet with the correspondence address --
Peri d f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disp sition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Pri rity under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 20, 2004 has been entered.

Response to Amendment

2. The Amendment submitted on September 17, 2004, has been entered. Claims 1, 4, 7, and 10 have been amended. Therefore, the pending claims are 1 – 10.
3. The amendment is sufficient to overcome the 35 USC 112 2nd rejection to claims 4 and 8 (response, page 5).
4. The 35 USC 103 rejection based on Fastenau et al. (6,037,047) is withdrawn since Fastenau et al. fails to teach making the yarn from a filament having a flattened cross section of constant thickness.
5. The 35 USC 103 rejection based on Aneja (5,626,961) is withdrawn since Aneja fails to teach using a filament having a flattened cross section of constant thickness.

Claim Objections

6. Claim 1 is objected to because of the following informalities: In line 5, the word constant is misspelled “contant” . Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1 – 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The Applicant has amended the claims to recite that the cross section of the monofilaments are selected from the group “consisting of a flattened cross section of constant thickness, a flattened cross section of constant thickness having grooves, and combination thereof” which is not supported by the disclosure.

While the disclosure teaches using monofilaments having a flattened cross section as defined by the degree of flatness in the yarn and the disclosure teaches that the filaments can have grooves, the disclosure fails to teach that the entire cross section of the monofilament is a constant thickness with or without grooves. In fact, the degree of surface smoothness is a measurement that compares smallest thickness of the monofilament to the largest thickness of the monofilament. If the thickness of the monofilament were constant as claimed then this ratio would only ever be equal to one. Further, the figures show that the grooves are embossed into each side of the monofilament, making the thickness at the grooves smaller than the thickness in the rest of the fiber. Hence, the grooved areas are not the same thickness as the rest of the fiber. Finally, even the cross section shown in Figure 1 without grooves does not have a constant cross section because the ends are rounded and not squared off. Therefore, the

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disclosure does not teach making the fabric from a filament having a cross section of constant thickness.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-252740A (English Translation).

The features of JP 07-252740A have been set forth in the previous Office Actions. JP 07-252740A discloses a yarn for use in airbags having a total yarn size of 180 to 450 denier, made from filaments having a degree of compression of 1.5 or more and a filament size of 0.1 to 7.0 denier (constitution). The degree of compression is defined as the ratio of the major axis to the breadth (paragraph 19). As shown in the figures, the cross section of the filament can take various shapes, including a rectangular fiber (which has a constant thickness), an elliptical fiber, and an elliptical fiber with grooves, as long as the filament has the desired degree of compression. The degree of smoothness of the rectangular fiber would be one since the fiber has a constant thickness. The yarns are woven together to produce a fabric having a cover factor of 1500 – 2000 (paragraph 26). Further, JP 07-252740A discloses that the fabric should have a air permeability below 1.2 and preferably below 0.7 cc/cm²/sec (paragraph 25). Furthermore, entanglement can be applied to the yarn during processing (paragraph 36).

While JP 07-252740A discloses that the air bag fabric should have a low air permeability under low pressure, preferably below 0.7 cc/cm²/sec, JP 07-252740A fails to teach producing a woven fabric with an air permeability under low pressure of less than

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0.1 cc/cm²/sec and an air permeability under high pressure of at most 20 cc/cm²/sec. The air permeability in an air bag fabric is controlled to optimize the rate at which the airbag expands as well as control the rate at which an impact is absorbed. Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the air permeability of the fabric under low pressure and high pressure, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215. One of ordinary skill in the art would be motivated to produce a woven fabric with an air permeability such that the bag will expand quickly when activated while cushioning a passenger by absorbing an impact during a crash. Further, one of ordinary skill in the art would be motivated to optimize these values so that the airbag will perform within the known safety standards and protect the passengers from injury. Thus, claims 1 – 3 are rejected. Claims 5 – 7, 9, and 10 are rejected for the reasons of record.

While JP 07-252740A discloses that the yarns can include entanglements, JP 07-252740A fails to teach the number of entanglements per length. However, it would have been obvious to one of ordinary skill in the art to optimize the number of entanglements per length, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, as set forth above. One of ordinary skill in the art would be motivated to add entanglements so that the filaments form a yarn without adding too many entanglements which would prevent the flat filaments from lying flat in the woven fabric as well as lower the strength of the yarn by adding excessive twist. Thus, claims 4 and 8 are rejected.

Response to Arguments

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11. Applicant's arguments filed September 17, 2004 have been fully considered but they are not persuasive. The Applicant argues that JP 07-252740A fails to teach an air permeability below $0.3 \text{ cc/cm}^2/\text{sec}$ and it would not have been obvious for one of ordinary skill in the art to modify the air permeability of the fabric to below $0.1 \text{ cc/cm}^2/\text{sec}$ as claimed (response, pages 6 – 9). While it is true that the examples produced by JP 07-252740A go as low as $0.3 \text{ cc/cm}^2/\text{sec}$, JP 07-252740A teaches as a whole that the air permeability should be below $0.7 \text{ cc/cm}^2/\text{sec}$ and does not limit the air permeability to greater than $0.3 \text{ cc/cm}^2/\text{sec}$. Therefore, it would have been obvious to one of ordinary skill in the art to optimize the air permeability of the fabric to control the rate the air bag inflates and deflates during impact to maximize the protection of the passengers in the vehicle. Since the factors such as the fiber shape, weave structure, yarn structure and cover factor are directly related to the air permeability of the fabric, and are already taught by JP 07-252740A, then one of ordinary skill would only need to optimize these features within the ranges taught by JP 07-252740A to optimize the air permeability. Further, modifying these features would produce a predictable finished product since one of ordinary skill in the art would know how these features influence the permeability of the fabric and JP 07-252740A discloses how using the flattened fibers can attain a lower air permeability when compared to fabrics made from round fibers (paragraph 26). Thus, the rejection is maintained.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jenna-Leigh Befumo
January 3, 2005